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a chemical library comprising storage locations for at least approximately 3000 multiwell plates, each of which comprises at least approximately 96 individual chemical wells for containing samples;

a computer controlled chemical well retriever for programmable selection and retrieval of a subset of said multiwell plates comprising selected ones of said chemical wells;

a transport path coupled to said chemical library for receiving said subset of said multiwell plates from and returning said subset of said multiwell plates to said chemical library,

and

a plurality of automated liquid handling devices operatively coupled to said transport path, whereby said high throughput chemical screening system is configured to process at least approximately 25,000 chemical samples in a 24 hour period;

wherein said system is programmable to retrieve and handle either (a) the samples from every one of the chemical wells of an entire multiwell plate or (b) the samples from a subset of chemical wells within said multiwell plate.

Please cancel Claim 8, without prejudice to, or disclaimer of, the subject matter contained therein.

20. (ONCE AMENDED)

A high throughput chemical screener comprising:

a chemical library comprising storage locations for at least approximately 1000 multiwell plates, each having a plurality of chemicals;

a computer controlled chemical retriever for programmable selection and retrieval of selected ones of said plates;

a transport path coupled to said chemical library; and

a plurality of automated liquid handling devices coupled to said transport path, wherein said devices handle chemicals from less than all of the wells of said retrieved plates.

24. (ONCE AMENDED)

A high throughput chemical screening system comprising: